

ALL REJECTIONS UNDER 35 USC §§102 AND 103 - TRAVERSED

All 35 USC rejections (i.e., the 35 USC §102(b)/103(a) rejection of claims 1 and 9 as being anticipated by Vince (U.S. Patent 5,068,631), and the 35 USC §103 rejection of claims 1-24 as being unpatentable over various combinations of Vinciarelli et al. (U.S. Patent 5,088,016), Vince and Pavlovic (U.S. Patent 6,152,775)) are respectfully traversed.

All descriptions of Applicant's disclosed and claimed invention, and all descriptions and rebuttal arguments regarding the applied prior art, as previously submitted by Applicant in any form, are repeated and incorporated hereat by reference. Further, all Office Action statements regarding the prior art rejections are respectfully traversed. As additional arguments, Applicant respectfully submits the following.

In order to properly support a §102 anticipatory-type rejection, any applied art reference must disclose each and every limitation of any rejected claim. The applied art does not adequately support a §102 anticipatory-type rejection because, at minimum, such applied art does not disclose (or suggest) the following discussed limitations of Applicant's claims.

Applicant's disclosed and claimed invention is directed toward providing arrangements to suppress noise with respect to inputs for a clock generator. In order to accomplish the same, Applicant's disclosed and claimed invention (e.g., independent claim 1, and claims dependent therefrom) advantageously utilizes a ferrite bead disposed along the voltage input line, with the ferrite bead having a first resistance. A bulk capacitor is also connected between an output side of the ferrite bead and ground (i.e., electrically between the ferrite bead and the clock generator),

with the bulk capacitor having a substantially low equivalent series resistance. The ferrite bead and the capacitor are provided in an "L" shaped filter configuration (see added claims 17, 19, 21, 23), and form a resistor divider circuit to assist in noise signal removal (see added claims 18, 20, 22, 24). Other ones of Applicant's other sets of independent claims and claims dependent therefrom have similar or analogous limitations to those of independent claim 1 and claims dependent therefrom.

Traversal of the rejections is proper, as it is respectfully submitted that the Examiner has applied a number of unwarranted logical leaps to the references in a failed attempt to support the rejections. More particularly, turning first to Vince, it is respectfully noted that Vince had previously been applied against Applicant's claims, and Vince had previously been overcome. Within the Office Action, the Examiner's comments (page 2, largest paragraph) have characterized Vince's capacitor 107-1 as "a bulk ceramic capacitor 107-1". Traversal is appropriate because Vince nowhere describes the capacitor 107-1 as a bulk capacitor, and in fact, numerous locations throughout Vince explicitly detail capacitors 107-1, 107-2, etc., as "decoupling capacitors" (e.g., column 2, lines 24-15). Vince's column 3, line 19, likewise explicitly characterizes Vince's capacitor 18 (FIGS. 1-3) as a decoupling capacitor.

As understood by the undersigned, a "bulk capacitor" has a function of providing large quantities of currents above the bandwidth (di/dt) capability of a regulator, whereas a "decoupling capacitor" performs a differing function (e.g., reduction of transient noise). Applicant's FIG. 5, in fact, illustrates an example arrangement wherein both a bulk capacitor 20 and a plurality of decoupling

capacitors 64 are used in a same locality within a circuit so as to provide their respective differing functions. Nowhere does Vince describe the capacitor 107-1 (or 108) as a "bulk capacitor". Accordingly, it is respectfully submitted that the Examiner's attempted characterization of the same as a "bulk" capacitor represents an unwarranted logical leap (apparently provoked by hindsight teachings gleaned from Applicant's own disclosure).

As another logical leap, the Examiner's comments (page 2, largest paragraph) also states, "ceramic capacitor 107-1 (which inherently has a low ESR because all ceramic capacitors have "low" ESR)." Traversal again is appropriate. More particularly, as set forth in Applicant's 11 October 2002 Amendment, the term "low equivalent series resistance" (sometimes called low ESR) is a specialized phrase known to persons skilled in the art to which the present invention is directed. That is, thousand of differing types of capacitors are sold, and include all ESR types, e.g., high-ESR, ESR, low-ESR, etc. It is respectfully submitted that all ceramic capacitors are not low-ESR. In fact, a search on the internet using the terms "high ESR ceramic capacitor" turned up a large number of hits, ones of such hits showing high-ESR ceramic capacitors that were available. Vince, itself, nowhere discloses that it's ceramic capacitor 107-1 is a low-ESR capacitor. Accordingly, it is respectfully submitted that the Examiner's attempted characterization of the capacitor as a "low-ESR" capacitor again represents an unwarranted logical leap (apparently provoked by hindsight teachings gleaned from Applicant's own disclosure).

As mentioned previously, Vince had previously been applied against Applicant's claims, and Vince had previously been overcome. Accordingly, in

addition to the above (unwarranted logical leap) arguments, Applicant respectfully repeats the following prior arguments with proper adjustment.

More specifically, Vince is directed to electromagnetic filtering for a VLSI device having multiple power input leads. The Vince filtering arrangements make use of ferrite beads (FB) 109, as well as a plurality of capacitors (e.g., 108, 107-1, etc). It is respectfully noted that the capacitors 107-1, 107-2, 107-3 and 107-4 are decoupling capacitors (see, e.g., Vince's column 2, lines 24-25).

As a first difference between Vince and Applicant's clarified claims, it is noted that Applicant's bulk capacitor 20 (Applicant's FIG. 2) is disposed on an output side of the ferrite bead, whereas Vince's does not have a bulk capacitor. Still further, it is respectfully noted that, whereas Applicant's invention is provided in an "L" shaped filter configuration, Vince's arrangements are provided in a "p" shaped filter configuration (using Vince's decoupling capacitor 108 and decoupling capacitor 107-1). Even further still, while Applicant's invention is disclosed and claimed as including a bulk capacitor having a substantially equivalent series resistance (thus forming a resistor divider circuit to assist in noise signal removal), Vince's disclosure nowhere discusses any resistance values.

It is well known in the filter design art, that although some filters may look similar, even a simple change in filter configuration and/or parameters of components within a configuration can very drastically alter/affect a filter's response characteristics. Vince has three substantial differences from Applicant's disclosed and claimed invention, i.e., (1) no bulk capacitor, (2) un-discussed and therefore unknown ferrite-bead/capacitor resistance values, and, (3) a "p" shaped filter configuration (as opposed to an "L" shaped filter configuration). Accordingly, it is

respectfully submitted that Vince's arrangements will operate drastically different from Applicant's disclosed and claimed filtering arrangements.

Still further, it is respectfully submitted that it would not have been obvious to modify Vince's arrangement in a manner to arrive at Applicant's disclosed and claimed invention. More particularly, the Vince reference itself (i.e., without the hindsight knowledge of Applicant's invention) must provide the suggestion to modify. There are hundreds, if not thousands, of modifications which may be made to the Vince et al. arrangements. Vince, itself, nowhere discloses or suggest that modification "might result in increased filter performance or optimization" (as was argued within the Office Action remarks). Instead, it is respectfully submitted that the Office Action remarks concerning an "increased filter performance" or "optimization" incentive are gained only from the hindsight knowledge of Applicant's invention.

Turning now to rebuttal of the Vinciarelli et al. reference, the Examiner (e.g., page 3, last paragraph) is again making unwarranted logical leaps. For example, the Examiner states, "as the Vinciarelli et al. reference is silent on the exact specifics of the inductor, any art-recognized equivalent inductor would have been useable therewith such as the well-known ferrite bead with its inherent resistance." It is respectfully submitted that just because a reference is silent about specifics is NOT a free license to substitute or infer specifics (e.g., such as hindsight specifics gleaned from Applicant's disclosure).

For example, it is unknown whether the Vinciarelli et al. filter arrangement would properly function with substitution of a ferrite bead. As mentioned previously, it is well known in the filter design art, that even a simple change in filter

configuration and/or parameters of components within a configuration can very drastically alter/affect a filter's response characteristics. The Examiner's comments state that a ferrite bead is a "equivalent" to the Vinciarelli et al. inductor, while there is no proof offered of equivalence. Accordingly, it is respectfully submitted that the Examiner's attempted characterization of the ferrite bead as an "eqivalent" inductor again represents an unwarranted logical leap (apparently provoked by hindsight teachings gleaned from Applicant's own disclosure).

On page 4 of the Office Action, the Examiner's comments state that, "use of 'D' case would have been obvious because the reference is silent on the case used, any art-recognized equivalent have been usable such as the conventional 'D' case." Traversal similar to the above can be made. That is, the Examiner is again using the improper "silence=free license" approach re modification with the "D" case.

Regarding the Examiner comments (page 3, "The Vinciarelli" paragraph) that Vinciarelli et al. discloses "a low ESR" tantalum capacitor, traversal again is appropriate. More particularly, at best, Vinciarelli et al. mentions "ESR". Nowhere does Vinciarelli et al. disclose or suggest that the capacitor should be a low-ESR.

In terms of all the modifications that the Examiner is attempting to make to Vinciarelli et al.'s arrangement, again it is respectfully submitted that even a simple change in filter configuration and/or parameters of components within a configuration can very drastically alter/affect a filter's response characteristics. Substitution is anything but simple when it comes to the filter art.

With regard to combination of Vince and Vinciarelli et al., it is respectfully noted that (at minimum), since neither such references discloses or suggests using

a low-ESR type capacitor, combination thereof, still would not have disclosed or suggested Applicant's disclosed and claimed invention.

With regard to the final Pavlovic reference, since it appears that Pavlovic has been cited merely for teaching concerning a 0.3 ohm ferrite bead resistance, Pavlovic does nothing to cure the deficiencies mentioned above with respect to the two primary references.

In conclusion, it appears that the Examiner has attempted to find references and has dissected and made substitutions at will in a hindsight attempt to arrive at Applicant's invention. The Federal Circuit has stated, “[t]he mere fact that the prior art may be modified in a manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification.” *In re Fritch*, 972 F.2d 1260, 1266 n.14 (Fed. Cir. 1992), citing *In re Gordon*, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984).

As a result of all of the foregoing, it is respectfully submitted that the previously applied art would not support a §102 anticipatory-type rejection or §103 obviousness-type rejection of Applicant's clarified claims. Accordingly, reconsideration and withdrawal of such §102 and §103 rejections, and express written allowance of all of Applicant's clarified and added claims, are respectfully requested.

SPECIFIC TRAVERSAL OF “OFFICIAL NOTICE”

Office Action comments in support of the art rejection(s) assert that certain claimed features were well known in the art, i.e., without providing supportive art references for such assertion. With regard to such assertion of apparent judicial (i.e.,

Examiner) notice of common knowledge or well-known prior art, attention is directed to MPEP §2144.03 which states, "If the applicant traverses such an assertion the examiner should cite a reference in support of his or her position." Accordingly, in view of Applicant's traversal in this regard, and in accordance with the provisions of MPEP §2144.03, Applicant respectfully requests that a documentary proof be cited to explicitly show that such features were explicitly known in the art, or alternatively, Applicant respectfully requests withdrawal of all rejections based upon such unsupported judicial notice. Further, at this point, it is respectfully submitted as a reminder that, if new art is now cited against any of Applicant's unamended claims, then it would not be proper to make a next action final.

EXTENSIVE PROSECUTION NOTED

Applicant and the undersigned respectfully note the extensive prosecution which has been conducted to date with the present application, and thus Applicant and the undersigned would gratefully appreciate any considerations or guidance from the Examiner to help move the present application quickly to allowance.

EXAMINER INVITED TO TELEPHONE

The Examiner is herein invited to telephone the undersigned attorneys at the local Washington, D.C. area telephone number of 703/312-6600 for discussing any Examiner's Amendments or other suggested actions for accelerating prosecution and moving the present application to allowance.

CONCLUSION

In view of the foregoing amendments and remarks, Applicant respectfully submits that the claims listed above as presently being under consideration in the application are now in condition for allowance. Accordingly, early allowance of such claims is respectfully requested.

To the extent necessary, applicant petitions for an extension of time under 37 C.F.R. §1.136. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to ATSK Deposit Account No. 01-2135 (as Order No. 219.39043X00), and please credit any overpayment of fees to such Deposit Account.

Respectfully submitted,



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